EPA's Plan for Addressing PCBs in the Spokane River

July 14, 2015

This document sets out EPA's schedule, detailed more fully below, in response to the Order issued on March 16, 2015, by the U.S. District Court in Sierra Club, et al. v. McLerran, No. 11-CV-1759-BJR (March 16, 2015). In its Order, the Court directed EPA to:

> [C]onsult with Ecology and file herein, within 120 days of the date of this order, a complete and duly adopted reasonable schedule for the measuring and completion of the work of the Task Force, including quantifiable benchmarks, plans for acquiring missing scientific information, deadlines for completed scientific studies, concrete permitting recommendations for the interim, specific standards upon which to judge the Task Force's effectiveness, and a definite endpoint at which time Ecology must pursue and finalize its TMDL.

EPA sets out its schedule below, following a more general presentation of the variety of regulatory and non-regulatory considerations informing EPA's plan for addressing PCBs in the Spokane River.

SUMMARY

The goal of this plan is the attainment of applicable water quality standards for PCBs in the Spokane River. The plan describes significant ongoing regulatory and non-regulatory actions to identify and address sources of PCB pollution in the river. The plan provides that if the Spokane River remains impaired[1] for PCBs, the Washington Department of Ecology (Ecology) will initiate a TMDL to address the impairments by no later than July 15, 2028, and will finalize that TMDL by no later than July 1, 2030. Such a TMDL would establish PCB loads for point sources and nonpoint sources that would achieve the applicable water quality standards for PCBs. For the time period leading up to July 15, 2028, EPA's plan provides "benchmarks"—specified instream concentrations of PCBs that decrease incrementally over time. If the quantifiable benchmarks are not attained by specified dates certain (identified in the schedule in this document), then the trigger to initiate development of a TMDL would be accelerated. Under this schedule, a TMDL could be completed as early as July 2019 or as late as July 2030.

As described in greater detail below, all individually permitted dischargers to the Spokane River will be installing advanced treatment technologies that will significantly reduce their discharge of PCBs. As a result of those reductions and others, as well as uncertain but likely advances in analytical technologies to measure PCBs, a PCB TMDL developed pursuant to EPA's schedule will be more scientifically and technically defensible than any TMDL for PCBs that could be developed in the interim. This schedule reflects EPA's judgment that the actions being taken now to reduce PCBs are critical to the development of a TMDL in the future and are intended to maximize the

[1] For purposes of this document, "impaired" means that segments of the Spokane River and/or its tributaries remain listed by the State of Washington as impaired for non-attainment of applicable water quality standards for PCBs as of the relevant benchmark date.

resources that Ecology and the Task Force can devote to the ongoing efforts to reduce PCBs in the Spokane River.

CONTEXT REGARDING PCBs CONTAMINATION IN THE SPOKANE RIVER

By letter to Plaintiff's counsel dated April 2013, EPA determined that a constructive submission regarding a TMDL for PCBs in the Spokane River had not occurred and that an alleged non-discretionary duty under the CWA was not triggered. That determination was upheld by the Court in its March 2015 decision. In describing factors and circumstances EPA considered in the course of reaching that determination, EPA noted that work by the Task Force was ongoing. Neither EPA nor Ecology has previously described the Task Force and its ongoing work in detail in the briefing. Accordingly, EPA, in explaining the reasons for its schedule, also provides additional context regarding PCBs, water quality standards for PCBs, anticipated reductions in PCBs due to ongoing activities, as well as the ongoing work of the Task Force.

1. PCBs: Historic Uses and Health Effects

A polychlorinated biphenyl (PCB) is a synthetic organic chemical compound with one or more chlorine molecules attached to biphenyl, which is a molecule composed of two benzene rings. A congener is any single, unique well-defined chemical compound in the PCB category. There are 209 individual PCB congeners, and they differ from one another in the number and placement of the chlorine atoms. Most commercial PCBs are mixtures of different congeners and are generally known in the United States by their industrial trade names. The most common trade name is Aroclor. PCBs are human-made; there are no known natural sources.

PCBs were produced in large quantities within the United States from 1929 to 1979. Due to their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and many other industrial applications.

As a result of this widespread use for 50 years and because they do not break down readily after they are released, PCBs are ubiquitous, found throughout the natural environment in air, water, soils, and sediments. PCBs are found in plants and animals throughout the food chain. PCBs bioaccumulate in plants and animals and can reach levels in fish tissue that are hundreds of thousands of times higher than the levels in water. PCBs are also transported readily through the air, and have been found in remote locations, far from where they were initially released (ATSDR, 2000).

PCBs have a limited solubility in water. Because PCBs are hydrophobic compounds, they tend to bind to sediments and organic particulate matter, which in turn may enter the food chain rather than remain in the water column. Although background

levels for water column measurements can be in the parts per quadrillion range[2], the sediments in which PCBs tend to accumulate can often have levels two to three orders of magnitude higher.

PCBs have been shown to cause cancer in animals and are a probable human carcinogen. PCBs also cause a number of serious non-cancer health effects in animals, including effects on the immune system, reproductive system, nervous system, and endocrine system (ATSDR, 2000). Concerns about the toxicity of PCBs are largely based on twelve of the more highly chlorinated PCB congeners that share a structural similarity to, and toxic mode of action with, dioxin (van den Berg et. al, 2006).

Because of these adverse health effects, the Toxics Substances Control Act (TSCA) in 1976 prohibited the majority of manufacturing, processing, and distribution of PCBs. 15 U.S.C. § 2605(e)(3). Regulations implementing TSCA exclude from the prohibition products containing PCBs in concentrations less than 50 ppm, as well as manufacturing processes that inadvertently generate and release PCBs to products, air, and water in excess of specific regulatory thresholds.[3] EPA has identified 70 chemical processes with high potential to inadvertently generate PCBs (Fed. Register, 1983) and estimates an annual production of 100,000 pounds of inadvertently generated PCBs. Examples of products included in this calculation include some pigments and dyes that are commonly used in consumer products. Ecology has identified non-point releases, such as those from consumer products, as being increasingly important to control in order to reduce overall PCB delivery to humans and the environment (Ecology and Health, 2015). In a recent study, the City of Spokane detected PCBs in all but two of almost 50 consumer product samples, including yellow pigmented road paint, hydroseed and laundry soap (City of Spokane, 2015). A recent Ecology analysis identified the congener PCB-11 in 49 consumer products, including food packaging and yellow spray paint (Ecology 2014). Because these PCBs are found legally in new consumer products, this may make it more difficult to attain water quality standards for PCBs.

2. Water Quality Standards for PCBs in the Spokane River

Standards for PCBs in surface water are set at levels to protect human health. Because the primary way by which people are exposed to PCBs is through the consumption of contaminated fish and/or shellfish (in which PCBs may have

[2] In 2015, background water column measurements at the outlet of Lake Coeur d'Alene were largely below 50 pg/L (or 50 parts per quadrillion) (LimnoTech, 2014).

[3] The concentration of inadvertently generated PCBs in products leaving any manufacturing site or imported into the United States must have an annual average of less than 25 ppm, with a 50 ppm maximum. The concentration of inadvertently generated PCBs in the components of detergent bars leaving the manufacturing site or imported into the United States must be less than 5 ppm. The release of inadvertently generated PCBs at the point at which emissions are vented to ambient air must be less than 10 ppm. The amount of inadvertently generated PCBs added to water discharged from a manufacturing site must be less than 100 micrograms per resolvable gas chromatographic peak per liter of water discharged. 40 C.F.R. 761.3 (definition of excluded manufacturing process).

bioaccumulated in tissue), assumptions about average fish consumption rates affect the derivation of concentrations in water quality standards. In Washington, the water quality criterion for total PCBs is 170 picograms per liter (pg/L). 40 C.F.R. 131.36(b)(1) & (d)(14). Washington's criterion, which was promulgated by EPA as part of the National Toxics Rule, was based on an assumed daily fish consumption rate of 6.5 grams per day.[4] In 1996, Ecology began listing the various segments of the Spokane River and adjacent water bodies (see map in Appendix A) as impaired due to PCBs based on levels of PCBs in edible fish tissue[5] (specifically, fish tissue levels projected to represent an exceedance of the water column concentrations in the water quality standards). The listings were not directly based on non-attainment of the numeric water criteria, which are water column concentrations.

In January of 2015, Ecology proposed revisions to its water quality criteria established to protect human health. Specifically, Ecology proposed to adopt a numeric water quality criterion in its standards to incorporate the 170 pg/L value for total PCBs as State regulations.[6] Ecology also proposed a generally-applicable narrative water quality criterion that "[a]ll waters shall maintain a level of water quality when entering downstream waters that provides for the attainment and maintenance of the water quality standards of those downstream waters, including the waters of another state." Ecology completed the public process on the draft rule on March 23, 2015, and is proceeding to take final action on its proposed revisions. Depending on the scope of Ecology's final action, EPA anticipates that the revised water quality criteria will (after EPA approval) provide for greater protections for downstream waters, including the Spokane Tribe tribal waters.

The waters of the Spokane Tribe are downstream from the segments of the Spokane River and adjacent water bodies that Ecology listed as impaired. On December 19, 2013, EPA approved water quality criteria for PCBs established by the Spokane Tribe. The Tribe's water quality criteria for PCBs are based on a fish consumption rate that is protective of human health and designed to support traditional subsistence practices. In the absence of site-specific fish consumption data, EPA's recommended criteria for PCBs are based on an assumed national fish consumption rate of 17.5 grams per day for the general population, and/or 142 g/day for high fish consumers; the EPA-approved Tribal standards are based on an assumed fish consumption rate of 865 grams per day. The Tribe's water quality criterion for total PCBs is 1.3 pg/L. This criterion is more than two orders of magnitude lower than the current Washington criterion and is probably the lowest PCB criterion in the country.

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[4] Since then, EPA updated the fish consumption rate assumption to 17.5 grams per day for PCBs. Based on the revised fish consumption rate, EPA now recommends water quality criteria for total PCBs at 64 picograms per liter for PCBs.

[5] Sampled fish include rainbow trout, brown trout, mountain whitefish, white crappie, walleye, yellow perch, smallmouth bass, largemouth bass, and kokanee and, for more recent listings, also largescale sucker.

[6] The proposed criterion of 170 pg/L, while identical to the current criterion, was derived differently, using a higher fish consumption rate but also a higher cancer risk level. In public comments provided to Ecology, EPA expressed concern about the cancer risk level used.

PCB levels this low pose analytic difficulties. The method approved by EPA for detecting total PCBs for Clean Water Act permits can quantify PCBs at concentrations of about 500,000 pg/L or greater, which is about 3,000 times Washington's PCB criterion and about 385,000 times the Spokane Tribe's PCB criterion. The most sensitive method currently available, which has not been approved by EPA for use with Clean Water Act permits, can quantify PCBs at 10 to 30 pg/L or higher, which is still approximately 10 times the Spokane Tribe criterion.

3. Sources of PCBs in the Spokane Watershed and PCB Control Measures

The PCB sources in the Spokane Watershed are numerous and diffuse, and therefore difficult to identify in their entirety. PCB sources include legacy contamination of soil and groundwater; some building caulks and paints; and inadvertently generated PCBs that remain in today's consumer products. The PCBs in these diffuse sources are mobilized by a variety of mechanisms that include volatilization into the air (e.g. from building materials); and transport of PCBs that adhere to surface particulate matter by rainwater, stormwater, sanitary sewage, and groundwater. When PCBs have mobilized, they enter the Spokane River through a variety of pathways that include air deposition, stormwater, groundwater and municipal and industrial wastewater discharges.

Numerous commercial and industrial sources discharge effluent containing PCBs (both legacy PCBs and those found in modern consumer products) to the Spokane River and its tributaries in Idaho and Washington and from Spokane Tribal lands. The largest of these types of discharges include municipal wastewater treatment facilities (three in Idaho, three in Washington); industrial facilities (Kaiser Aluminum and Inland Empire Paper) and three fish hatcheries (in Washington and on the Spokane Tribal lands). Municipal separate storm sewer systems and other sources of stormwater discharges in Washington and Idaho also contribute to PCB loadings in the Spokane River. Nonpoint sources of pollution that contribute PCB loads include groundwater and air deposition. Other potential sources of PCB loading include unregulated stormwater discharges, and point and nonpoint source discharges in tributaries to the Spokane River.

A. Advanced Solids Removal Will Reduce PCB Loading to the Spokane River

Point-source dischargers to the Spokane River[7] will be responsible for the most significant expected reductions in PCB loading to the river. All of these facilities are subject to NPDES permit requirements to install advanced solids-removal treatment technology that will remove substantial quantities of PCBs. The permit requirements are the result of an EPA-approved Ecology TMDL to restore dissolved oxygen (DO) levels in the Spokane River and adjacent water bodies. DO levels are dependent, in part, on phosphorous levels, and the permits therefore require phosphorous removal. Upstream

[7] These dischargers include municipal wastewater treatment plants for the cities of Spokane, Liberty Lake, Coeur d'Alene, Post Falls, and Hayden, as well as the industrial discharges from Inland Empire Paper Company and Kaiser Aluminum Fabricated Products.

facilities in Idaho discharging to the Spokane River are also required to install this advanced treatment technology to meet the downstream state water quality standard for DO as required under NPDES regulations.[8] In order to achieve the lower phosphorus limits in the permits, advanced solids-removal technology is required; this technology will also remove PCBs, which are generally found adhering to solids. With the exception of the permit for the municipal wastewater treatment plant serving Spokane County (which was constructed using this technology), each of the permits includes a compliance schedule ranging between eight to ten years. The compliance schedules in the permits are based on the need for time to provide for capitalization (funding), installation, and optimization. By the end of 2024, all permittees must be in compliance with the new permit requirements.

The advanced treatment technology to meet the phosphorus limits is projected to result in significant reductions of PCBs entering the Spokane River. Installation and optimization of the advanced treatment necessary to restore dissolved oxygen levels may result in very significant PCB load reductions from each source. The Task Force reports that membrane filters in use at the Spokane County facility have demonstrated the capability to remove "up to 99% of PCBs from municipal wastewater facilities." (Task Force, 2015). Until the treatment is installed and optimized, however, the achievable concentrations remain uncertain.

In addition to the PCB reductions expected based on solids removal, the individual permits for discharges to the Spokane River in both Washington and Idaho include requirements specifically intended to reduce PCBs through further "upsource" controls on PCBs in solids. All of the permits for municipal sewage treatment plants include requirements that the permittee develop and implement toxics management plans addressing source control of PCBs from the following: contaminated soils and sediments; storm water entering the wastewater collection system; industrial and commercial sources, including paint, caulking, soaps and cleaners. The permits also require public education regarding the difference between products that are demonstrably "free" of PCBs and those products that are labeled "non-PCB," but which likely contain PCBs at concentrations below the federal regulatory thresholds. The permit for Kaiser Aluminum includes a requirement to continue PCB source identification and cleanup actions initiated under the State's Model Toxics Control Act (MTCA) cleanup order, including a "scope of work for additional source identification efforts."

In response to the Court's Order of March 2015, EPA has prepared detailed permitting recommendations that provide guidance for the issuance of new permits for the Spokane River municipal wastewater treatment plants, the industrial facilities, three fish hatcheries in the watershed, and all municipal and general stormwater permits associated with the Spokane River and its adjacent waters. EPA issues some of the relevant hatchery and stormwater permits, as well as the Idaho municipal wastewater treatment plant permits. The recommendations have been transmitted to Ecology for

[8] Ecology's TMDL to restore dissolved oxygen could not set wasteload allocations for Idaho dischargers, but the TMDL assumed that Idaho dischargers would also be required to reduce their phosphorous loads. EPA subsequently used these assumptions in developing the permits for the Idaho dischargers.

their use in municipal, industrial, hatchery, and stormwater permits, and are attached to this document in Appendix B.

In a real and meaningful way, the requirements of the municipal and industrial wastewater permits for discharges to the Spokane River are already poised to make significant reductions to discharges of PCBs. Implementation of the existing permit requirements and EPA's new permitting recommendations may well achieve all the PCB reductions possible using current technologies and toxics reduction strategies. EPA's schedule is intended to provide adequate time for those measures to be implemented, for water column concentrations to come into equilibrium, and for the impacts of these reductions on fish tissue to be assessed.

B. Remediation at Kaiser Aluminum Facility

In the past, the Kaiser Aluminum Fabricated Products facility used hydraulic oils containing high concentrations of PCBs for aluminum casting operations. Kaiser's long-term use and storage of PCB-contaminated oils have contaminated the soil and underlying groundwater with PCBs. Since 2005, Kaiser has conducted a series of investigation and cleanup activities for soil and groundwater under the authority and requirements of Ecology's cleanup regulations, the state's MTCA. The investigation and cleanup required by MTCA is separate from Kaiser's participation on the Task Force.

In 2012, Ecology issued an Amended Agreed Order requiring soil excavation and capping of deeper soil to address PCB contamination; these actions have been completed, resulting in the removal of 540 tons of soil that contained elevated levels of PCBs. The 2012 order also requires Kaiser to initiate a PCB groundwater treatment pilot study by October 30, 2015. The contamination of groundwater underlying the Kaiser facility is widespread, with PCB levels exceeding 500,000 pg/L (Hart Crowser 2012). After completion of this pilot study, Ecology will issue a cleanup action plan that will specify the actions that Kaiser must take to remediate the PCB-contaminated groundwater. Ecology estimates that this groundwater treatment system will be operational by 2020. Groundwater from the Kaiser facility discharges to the Spokane River, but the extent to which the contaminated groundwater affects the PCB concentrations in the Spokane River is unknown.

C. Local Electric Utility Is Removing PCB-Containing Transformers

Avista Utilities, the company that provides electric service to large parts of eastern Washington, including the Spokane area and northern Idaho, initiated a three-year program to remove all of its overhead electrical distribution transformers containing PCBs. Although transformers with higher PCB concentrations were removed years ago, thousands of transformers containing PCBs at concentrations less than 50 ppm remained in service. As of 2015, Avista has retired most of the remaining PCB-containing transformers and plans to eliminate all PCB-containing transformers by 2018. Electric transformers represent significant and historically high sources of intentionally manufactured PCBs, including the dioxin-like congeners. Removal of these PCB sources will ensure that these pollutants do not end up in the Spokane River.

D. NPDES Permits for Discharges from Municipal Separate Storm Sewers

A comparatively recent expansion of the NPDES permitting program to apply to discharges from municipal separate storm sewer systems (commonly referred to as "MS4s") will reduce the discharge of particulate solids from diffuse sources that contaminate stormwater runoff, which in turn will further reduce the loading of PCBs into the Spokane River and adjacent waterbodies. Contaminated stormwater runoff is commonly transported and discharged through MS4s to nearby waterbodies through hundreds, if not thousands of outfalls within the MS4. Under federal rules, the MS4s discharging to the Spokane River watershed[9] were required to apply for discharge authorization under the NPDES permitting program.

Discharges from the Washington MS4s are authorized under an Ecology general permit issued in 2012 and expiring in 2019. Discharges from the Idaho MS4s are currently regulated by individual NPDES permits[10]; EPA is preparing to propose issuance of a state-wide MS4 general permit (during the current calendar year) that would replace the individual MS4 permits in Idaho. Under MS4 stormwater permits, each regulated MS4 is required to develop and implement a comprehensive stormwater program as defined by federal regulations at 40 CFR §122.34.

The current MS4 permits are reducing the loads of particulate solids to the Spokane River and are therefore reducing PCB loads. Reissuance of these permits provides opportunities for more targeted reductions. EPA's permitting recommendations, discussed above and included in Appendix B, contain several specific recommendations for MS4 permits, as well as recommendations for other types of stormwater general permits.

E. The Spokane River Regional Toxics Task Force

In recognition that nonpoint sources of PCBs in the Spokane watershed present a persistent and diffuse problem that cannot be easily addressed by direct regulatory authority, in 2011 Ecology made a significant change in reissued NPDES permits for facilities discharging into the Spokane River. The new permits required permittees to participate in the Task Force (Task Force, 2012).[11] Although participation is required by Ecology, the Task Force exists independent of and therefore is not legally required to account to Ecology. The Task Force includes voting members (representing NPDES permittees, state and local agencies other than Ecology, environmental groups and

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[9] Regulated MS4s discharging to the Spokane River watershed are located in the Washington cities of Spokane and Spokane Valley; Spokane County, Washington; Washington State University, Spokane campus; the Washington State Department of Transportation (areas located within the Spokane urbanized area); the Idaho cities of Coeur d'Alene and Post Falls; the Post Falls (Idaho) Highway District; Lakes (Idaho) Highway District; and the Idaho Transportation Department District 1.

[10] The EPA-issued individual permits for MS4s in the Spokane River watershed in Idaho expired in 2014.

[11] NPDES permittees who discharge to the Spokane River and are located in Idaho agreed to participate in the Task Force as well, and participation is similarly required in their NPDES permits, which EPA issued in September 2014.

other stakeholders) and advisory members (Ecology, tribal sovereigns, and EPA) (Task Force, 2014). The proceedings of the Task Force are facilitated by the William D. Ruckelshaus Center at Washington State University. The Task Force has convened approximately monthly since September 2011.[12] The goal of the Task Force is to "develop a comprehensive plan to bring the Spokane River into compliance with applicable water quality standards for PCBs" (Task Force, 2012, p. 7). This is to be accomplished through actions funded[13], designed, and implemented by members of the Task Force to identify and eliminate diffuse nonpoint sources of PCBs. Although the Task Force's work will be used if development of a TMDL is necessary, the Task Force was not convened for that purpose.

i. Task Force Accomplishments to Date

The Task Force has undertaken several projects and activities designed to identify sources and reduce PCBs in the Spokane River since it was created in 2011. In its June, 2015 "Coordinated Response," the Task Force describes its operations, accomplishments, and future plans. A major project, currently underway, is the Task Force's efforts to consolidate existing data about sources, fate, and transport of PCBs in the Spokane River and to address significant data gaps and inconsistencies. In November of 2013, a Task Force report identified the primary data gaps (in their decreasing order of importance): (1) determining magnitude of sources contributing to stormwater loads; (2) determining PCB sources upstream of the Idaho/Washington border; and (3) determining the significance of loading from atmospheric and groundwater sources. (LimnoTech, 2013). In August of 2014, the Task Force initiated a comprehensive, simultaneous data collection effort in Washington and Idaho. This data, collected during dry weather,[14] provided the first contemporaneous "snapshot" of PCBs in the Spokane River from Lake Coeur d'Alene to Nine Mile Dam. The Task Force will continue to collect additional data to complete the source characterization and quantification throughout 2015 and 2016 (Task Force, 2015).

In addition to data collection and analysis, the Task Force and its members individually have taken actions to identify and reduce diffuse sources of PCBs that impact stormwater. They are currently engaged in product testing to identify current consumer products with high levels of PCBs that have the potential to be released to the river. Task Force-sponsored analysis demonstrated that specific "hydroseed" products, used to manage stormwater erosion for many types of construction activities, contain elevated levels of PCBs. Because hydroseed is used to manage stormwater,

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[12] The Memorandum of Agreement that governs the formation and activities of the Task Force provides that the Task Force shall continue in effect for the duration of the Ecology 2011 through 2016 NPDES wastewater permit cycle. The Task Force is expected to continue thereafter if future NPDES wastewater permits require participation in the Task Force (Task Force, 2012, p. 1). Organizational documents, meeting notes, meeting schedules, and an annual reports of Task Force activities are maintained at a website. See www.srrttf.org.

[13] Task Force funding comes from NPDES permittee Task Force members and from Ecology. To date, the Task Force has spent approximately $1 million. Recently the Washington legislature appropriated $310K over two years to support continuation of the Task Force's work.

[14] The Task Force intends to conduct a similar data collection effort for wet weather conditions, but the high water necessary to collect such data did not occur in the 2014-2015 winter.

any PCBs in hydroseed will end up in the river. The Task Force is working collaboratively with manufacturers and State agencies to define construction specifications for hydroseed products and to inform the State purchasing process (Ecology, 2015). Hatchery fish food has also been identified as a potential source that readily enters the river. The Task Force's product testing efforts will continue to investigate this, as well as other potential sources of PCBs.

The Task Force has been active in political and policy arenas to encourage PCB restrictions, to address and reduce inadvertently generated PCBs, and to encourage preferential purchase of low- and no-PCB products for public use. The Task Force has also collaborated on public outreach activities to educate and engage the Spokane community on the risks of PCBs and the need to avoid activities that may release PCBs.

Washington enacted State legislation in 2014 that directed the Washington Department of Enterprise Services to "establish purchasing and procurement policies that provide a preference for products and products in packaging that does not contain polychlorinated biphenyls." RCW 39.26.280. The legislation also precluded other State agencies from knowingly purchasing "products or products in packaging containing polychlorinated biphenyls above the practical quantification limit except when it is not cost-effective or technically feasible to do so." Id. This legislation was adopted, in part, as a result of Task Force efforts to discourage use of products containing PCBs.

In June of 2014, the City of Spokane enacted a similar municipal ordinance providing a preference in City purchases for products and products in packaging that do not contain PCBs.[15] Implementation of the municipal ordinance should not only reduce the introduction materials containing PCBs, but also facilitate the development of an economic market with reduced amounts of PCBs.

ii. Further Work of the Task Force

The Task Force is into its third year of a phased five-year workplan (Task Force, 2013). Under the work plan, Phase 3 (analysis of data and characterization / quantification of PCB sources) and Phase 4 (assessment of potential BMPs) are scheduled for completion by December 2016. The Task Force anticipates a delay in completion of Phase 3 because this past winter wasn't wet enough to allow it to complete wet weather sampling. Completion of Phase 3, including the identification of locations with the highest PCB concentrations, should enable closure of one of the data gaps previously identified as the highest priority--source identification.

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[15] The ordinance provides as follows: Specifically, the ordinance provides that:

> No department may knowingly purchase products or products in packaging containing polychlorinated biphenyls above the practical quantification limit except when it is not cost-effective or technically feasible to do so. "Practical quantification limit" means the lowest concentration that can be reliably measured within specified limits of precision, accuracy, representativeness, completeness, and comparability during routine laboratory operating conditions, or using EPA Method 1668. "Not cost effective" means compliance with this requirement would increase the purchase price of the product by at least twenty-five percent.

Remaining phases under the workplan will address developing an inventory of sources and sinks of PCBs and developing a comprehensive plan for reducing PCBs.

SCHEDULE

In response to the Court's March 16, 2015 Order, and following consultation with Ecology, EPA sets out below its schedule for achievement of benchmarks and triggers for TMDL initiation and completion. In submitting this schedule, EPA clarifies that it does not interpret its regulations at 40 C.F.R. 130.7(d)(1), which are referenced in the Court's order, to give EPA the authority to establish a legally enforceable schedule for either the Task Force or the State. EPA's regulation states in relevant part that "[s]chedules for submission of TMDLs shall be determined by the Regional Administrator and the State." The regulation speaks to the collaborative nature of the development of such schedules. However, it does not authorize EPA to establish a legally enforceable schedule for State submissions of TMDLs or for work by an independent task force. This interpretation is consistent with past EPA guidance that "EPA *will not take any action* on the [State] schedule …," and that "the schedule is intended *to help* the public and EPA to understand the state's priorities and *assist* in work planning."(EPA, 2005, p. 63 (emphasis added)). EPA has not relied on the referenced regulation as the basis for this schedule, but rather has developed this schedule for the State's initiation and completion of a PCB TMDL in response to the Court's remand instructions.

1. December 31, 2016: The Task Force completes a Comprehensive Plan to bring the Spokane River into compliance with applicable water quality standards for PCBs. The comprehensive plan should include the following:

    a. A summary of the available data for PCBs in Spokane River water, fish tissue, and sediments.
    b. A list of the identified sources of PCBs in the Spokane River with estimates of current loadings.
    c. A range of BMPs expected to reduce or eliminate PCBs for each source or category of sources.
    d. Recommendations for BMP implementation.
    e. Recommendations for future studies to address remaining data gaps.

    If the Task Force does not submit a final Comprehensive Plan or if in EPA's determination the Comprehensive Plan does not adequately address the items listed above, then Ecology would immediately initiate development of a PCB TMDL for impaired segments of the Spokane River, and such TMDL would be submitted for EPA's approval by July 15, 2019.

2. December 15, 2020: Instream concentration of PCBs meets 200 pg/L based on the annual central tendency of the preceding year. EPA issues a determination by July 15, 2021, after conferring with Ecology and the Spokane Tribe, whether the instream concentration of PCBs meets 200 pg/L. If EPA determines that instream concentrations exceed 200 pg/L, then Ecology would immediately initiate development of a PCB TMDL for impaired

segments of the Spokane River, and such TMDL would be submitted for EPA's approval by July 15, 2023.

3. December 15, 2024: Instream concentration of PCBs meets 170 pg/L based on the annual central tendency of the preceding year. EPA issues a determination by July 15, 2025, after conferring with Ecology and the Spokane Tribe, whether the instream concentration of PCBs meets 170 pg/L. If EPA determines that instream concentrations exceed 170 pg/L, then Ecology would immediately initiate development of a PCB TMDL for impaired segments of the Spokane River, and such TMDL would be submitted for EPA's approval by July 15, 2027.

4. December 15, 2027: The applicable water quality standards for PCBs are met and the Spokane River and adjacent segments are no longer included on Washington's 303(d) list of impaired waters. EPA issues a determination by July 15, 2028, after conferring with Ecology and the Spokane Tribe, whether the waters meet the applicable water quality standards. If EPA determines that applicable water quality standards are not met or if the Spokane River and adjacent segments remain on Washington's 303(d) list of impaired waters, then Ecology would immediately initiate development of a PCB TMDL for impaired segments of the Spokane River, and such TMDL would be submitted for EPA's approval by July 15, 2030.

Under this schedule, a TMDL could be completed as early as July 2019 or as late as July 2030. Initiation of a TMDL can only be delayed as long as successive reductions of instream concentrations of PCBs are occurring consistent with the schedule.

In this Plan for Addressing PCBs in the Spokane River, EPA has described a complex array of factors that will affect PCB concentrations. The schedule does not contemplate immediate initiation of a TMDL because, in EPA's judgment, developing the TMDL at a later date is justified by the reductions that will occur and the data that will be gathered, as well as the likely changes to relevant water quality standards.

Perhaps most importantly, this schedule allows time to implement the advanced solids removal that is already required of the municipal wastewater treatment plants and the industrial dischargers to the Spokane. This treatment technology will reduce both phosphorus and PCBs discharged to the river. The permits contain compliance schedules, and all the facilities must be in compliance with their permit limits by the end of 2024. However, it takes time for instream and fish tissue concentrations to respond to decreases in loading, and it takes time for Ecology and the Task Force to conduct and analyze the monitoring data that is expected to describe the new share of the load attributable to point sources. Because this data is extremely relevant to the development of a TMDL, EPA has allowed three additional years beyond the conclusion of the last of the compliance schedules before making a determination about attainment of applicable standards. This will ensure that the water quality data reflect the dischargers' use of the new treatment technology.

In addition to providing time for the benefits of advanced treatment to be realized, the schedule also recognizes that it is very likely that applicable water quality standards will change. Although changes are expected, at this juncture it is very difficult to predict what the new standards will be or when they will be adopted. Washington has not proposed to modify its PCB criterion, but it has proposed to adopt a narrative water quality standard that would require that water quality in Washington will not contribute to violations of downstream water quality standards. Should this proposal be adopted, the Spokane tribal standard is a downstream standard that Washington would be required to protect. Such a change in standards would have significant implications for any TMDL that would be developed for PCBs in the Spokane watershed. The uncertainty about the relevant future standards, especially since they may be more protective than the current standards, provides another reason for not initiating a TMDL immediately.

EPA is also mindful that the work currently being performed by the Task Force provides immediate significant benefits that would not be realized should the Task Force cease functioning. Participation in the Task Force is required by current NPDES permits, but neither EPA nor Ecology can require particular work products. The Task Force, on its own initiative, is providing extensive data collection and analysis, conducting product testing, pushing for progress on preferential purchasing and reduction of inadvertently generated PCBs, and identifying and addressing nonpoint sources. This last element is especially important because this is work that will likely not be done by any other party, public or private, if not done by the Task Force. The benefits from voluntary Task Force activities are worth preserving.

Not only would deferring the initiation of a PCB TMDL according to EPA's schedule ensure a better and more defensible TMDL that provides greater environment benefit, requiring such a PCB TMDL now will likely disrupt important progress now underway. Once a TMDL is completed, each affected point source will be responsible for achieving its own individual wasteload allocation. This will likely eliminate the incentive for Task Force members to continue to work together to address sources for which they are not responsible. Prior to TMDL development, however, the Task Force is making progress to seek out and remove diffuse sources of PCBs. The Task Force is also collecting and analyzing data that will be crucial to the development of a TMDL, such as the dry weather synoptic sampling that occurred in August 2014. It is unlikely that Ecology would have the resources to conduct similar data collection projects. This data is useful to the Task Force now, and it will be useful to Ecology should development of a TMDL be necessary.

In EPA's judgment, there are substantial benefits to be gained from postponing development of the TMDL as long as sufficient progress is being made during the interim. EPA believes that its schedule strikes an appropriate balance between achieving instream reductions in the short-term and providing time to allow a number of ongoing activities to conclude.

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EPA's Plan for Addressing PCBs in the Spokane River

July 14, 2015

Appendix A

Map of the Spokane River Watershed from Lake Coeur d'Alene to the Nine Mile Dam

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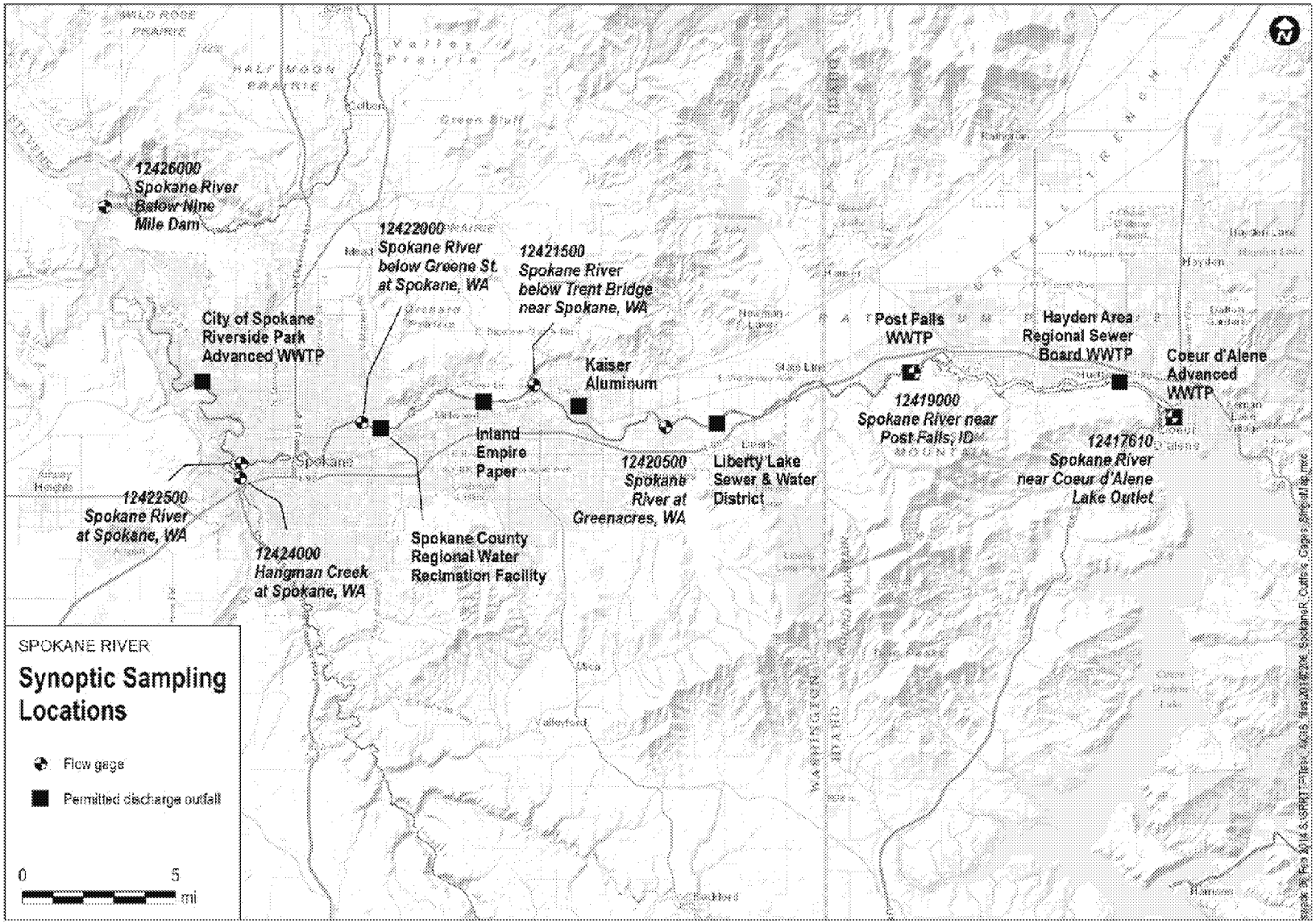
12426000
Spokane River
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below Trent Bridge
near Spokane, WA
City of Spokane
Riverside Park
Advanced WWTP
Kaiser
Aluminum
Post Falls
WWTP
Hayden Area
Regional Sewer
Board WWTP
Coeur d'Alene
Advanced
WWTP
12419000
Spokane River near
Post Falls, ID
12417610
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Lake Outlet
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12420500
Spokane
River at
Greenacres, WA
Liberty Lake
Sewer & Water
District
12422500
Spokane River
at Spokane, WA
12424000
Hangman Creek
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EPA's Plan for Addressing PCBs in the Spokane River

July 14, 2015

Appendix B

July 13, 2015, Letter from EPA to Ecology, re: NPDES Permitting Recommendations for the Spokane River

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
WATER AND
WATERSHEDS

JUL 13 2015

Reply to
Attn of: OWW-191

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Jim Bellatty
Washington State Department of Ecology
4601 North Monroe Street
Spokane, WA 99205-1295

Re: NPDES Permitting Recommendations for the Spokane River Watershed

Dear Mr. Bellatty:

In response to the U.S. District Court order in *Sierra Club et al. v. McLerran*, No. 11-CV-1759-BJR, the EPA is making the enclosed permitting recommendations to the Washington State Department of Ecology (Ecology). These recommendations are specific to National Pollutant Discharge Elimination System (NPDES) permits for point sources discharging to the Spokane River in Washington (water resource inventory areas—WRIAs—54 and 57), the Little Spokane River (WRIA 55). Except for recommendations specific to certain dischargers in the State of Washington, these recommendations are also applicable to EPA Region 10's direct implementation NPDES permitting for discharges to the Spokane River in Idaho (hydrologic unit code 17010305) and on the Spokane Indian Reservation.

Although the EPA encourages Ecology to consider and as appropriate accept the enclosed recommendations, they are not binding. The goal of these recommendations is to help Ecology establish enforceable and defensible permit conditions that can reasonably be expected to result in reductions in polychlorinated biphenyl (PCB) loading to the Spokane River and the Little Spokane River from regulated point sources. The EPA encourages Ecology to establish permit conditions to further that goal, even if they are different from the enclosed recommendations.

If you have any questions about the enclosed recommendations, please contact Brian Nickel of my staff at 206-553-6251 or Nickel.Brian@epa.gov.

Sincerely,

Michael J. Lidgard
Manager, NPDES Permits Unit

cc: Mr. Daniel Redline, Regional Administrator, Idaho Department of Environmental Quality Coeur d'Alene Regional Office

July 13, 2015

Permitting Recommendations for the Spokane River Watershed

Introduction

In response to the U.S. District Court order in Sierra Club et al. v. McLerran, No. 11-CV-1759-BJR, the EPA is making the following permitting recommendations. These recommendations are specific to National Pollutant Discharge Elimination System (NPDES) permits for point sources discharging to the Spokane River in Idaho (hydrologic unit code 17010305) and Washington (water resource inventory areas—WRIAs—54 and 57, including waters of the Spokane Tribe of Indians) and the Little Spokane River in Washington (WRIA 55).

Although the EPA encourages Ecology and the permitting authority for Idaho and the Spokane Tribe of Indians (currently EPA Region 10) to consider and as appropriate accept these recommendations, these recommendations are not binding. The goal of these recommendations is to help the permitting authorities establish enforceable and defensible permit conditions that can reasonably be expected to result in reductions in polychlorinated biphenyl (PCB) loading to the Spokane River and the Little Spokane River from regulated point sources. The EPA encourages permitting authorities to establish permit conditions to further that goal, even if they are different from the conditions recommended herein. This document is not legally enforceable; it does not confer rights or impose obligations on any party, including EPA, States or the regulated community.

Rationale for Recommending a BMP Approach to PCB Control

In general, the EPA is currently recommending a best management practices (BMP) approach to controlling and abating discharges of PCBs from point sources in the Spokane watershed. As explained below, the EPA believes this approach will be more effective in reducing discharges of PCBs than numeric effluent limits. The authority to establish BMP conditions in NPDES permits is provided in 40 CFR 122.44(k).

Limitations of Approved Analytical Methods for PCBs

Federal regulations require NPDES permits to include requirements to monitor discharges according to procedures approved under 40 CFR Part 136, unless another method is required by 40 CFR subchapters N or O (i.e. pretreatment requirements, effluent limit guidelines, or sewage sludge requirements).[1] For pollutants without approved analytical methods, the permitting authority shall specify in the permits the test procedure(s) to be used.[2]

The PCB water quality criteria for the States of Idaho and Washington and the Spokane Tribe of Indians are expressed as total PCBs, which is the sum of all congener, isomer, homolog, or aroclor analyses.[3]

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[1] 40 CFR 122.41(j)(4), 122.44(i)(1)(iv)

[2] 40 CFR 122.44(i)(1)(iv)

[3] See footnote q to 40 CFR 131.36(b)(1) and footnote o to IDAPA 58.01.02.210.01. See also: http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm#hhtable

Thus, any water quality-based effluent limit (WQBEL) for PCBs must also be expressed as total PCBs.[4] The approved analytical methods for PCBs can only measure PCB aroclors (i.e., the mixtures of PCBs that were sold commercially[5]). Because total PCBs may be measured as the sum of aroclor analyses, the approved methods can be used for total PCBs and therefore must be used to determine compliance with WQBELs for total PCBs.[6]

Of the methods approved for national use under 40 CFR 136, the most sensitive (EPA Method 608) can quantify PCB aroclors at concentrations of about 0.5 µg/L (500,000 pg/L) or greater, which is about 3,000 times Washington's PCB criterion (170 pg/L) and about 385,000 times the Spokane Tribe's PCB criterion (1.3 pg/L). Thus, any numeric WQBEL for PCBs for a point source to the Spokane River is likely to be orders of magnitude lower than the concentrations quantifiable by approved analytical methods.

If a WQBEL is below the detection limit, EPA guidance recommends that the permit include the actual limit and a requirement for the specific method to be used for monitoring. The permit should also state that any sample analyzed using the specified method and found to be below the minimum level will be deemed compliant with the limit.[7,8] Thus, WQBELs for total PCBs, which would need to be enforced using the approved methods, would, in effect, allow discharges of total PCBs many thousands of times greater than criteria. Because actual discharges from Spokane River point sources have been orders of magnitude below the quantification limits of the approved methods, such methods would provide no quantitative data on the actual loading of PCBs from point sources, no incentive for point sources to reduce discharges, nor any means to determine whether the discharges are increasing or decreasing.

Basis for Requirements to Analyze PCB Congeners in Support of BMPs

When establishing monitoring requirements for PCBs in order to assess the effectiveness of BMPs, EPA recommends that the permit authority require analysis of PCB congeners, because this aids in source identification, which will, in turn, aid in source control.[9] There are no approved methods for PCB congeners (as distinct from aroclors). As explained above, for pollutants without approved methods, such as PCB congeners, the permitting authority shall specify the test procedure(s) to be used; thus, permitting authorities have the flexibility to require the use of EPA Method 1668C for monitoring of PCB congeners.

Monitoring requirements for PCB congeners using Method 1668C can provide quantitative data about the actual PCB loading from point sources. This represents a significant advantage over numeric WQBELs for total PCBs, which, as explained above, currently must be enforced using the far less sensitive approved analytical methods. Therefore, the EPA is recommending that the permits continue to use a BMP approach to PCB control and require the use of EPA method 1668C for monitoring of final effluents for PCB congeners, instead of establishing numeric WQBELs enforced using methods approved under 40 CFR Part 136.

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[4] 40 CFR 122.44(d)(1)(iii)

[5] http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/aroclor.htm

[6] 40 CFR 122.44(i)(1)(iv)

[7] *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001, March 1991) Section 5.7.3.

[8] 40 CFR 136 Appendix A

[9] http://srrttf.org/wp-content/uploads/2014/10/2015-Spokane-PCBs-1.pdf

Even if the permitting authority determines that it is appropriate to include numeric WQBELs for PCBs to be enforced using methods approved under 40 CFR 136 in one or more of the subject permits, the EPA nonetheless recommends that the permitting authority include the following BMP requirements and monitoring for PCB congeners using EPA method 1668C in addition to any such numeric WQBELs.

1 General Recommendations for All POTWs Discharging to the Spokane River in Idaho and Washington, Kaiser Aluminum (permit #WA0000892), and Inland Empire Paper (permit #WA0000825)

The EPA recommends that:

- The permits should require monitoring of final effluents for PCB congeners using EPA Method 1668C at least quarterly.
- When establishing requirements for toxics management plans (TMP) or best management practices (BMP) plans, the permitting authority should consider the assessment by the Spokane River Regional Toxics Task Force ("Task Force") of the optimal mix of BMPs applicable to the permitted source.[10]
- The permits should require an annual report of PCB monitoring results and activities that have been completed or that have been ongoing in the past twelve months, pursuant to the TMP or BMP plan. The annual report should include:
    - A summary of effluent PCB data and any other PCB data relevant to the discharge (e.g., raw sewage, biosolids, pretreatment, or internal monitoring locations) collected over the previous twelve months.
    - A comparison of effluent PCB data collected over the previous twelve months to older effluent data.
    - An estimate of the reduction in PCB loading or concentration achieved through TMP or BMP plan activities during the previous twelve months.
    - Additional TMP or BMP plan activities planned for the following twelve months.
- The permits should require an update to the TMP or BMP plan if the permitting authority determines, based on the annual reports and other available information, that the TMP or BMP plan will not likely reduce PCB discharges to the maximum extent practicable.
- The permits should require reporting of total concentration of "dioxin-like" PCB congeners on DMRs.[11]
- The permits should require the complete congener analyses to be submitted as attachments to the DMRs.
- The permits should require receiving water monitoring for PCB congeners upstream and downstream of the outfalls using EPA Method 1668C at a frequency adequate to assess both high and low river flow conditions.

[10] The assessment of BMPs is Task 2 of Phase 4 of the Task Force's Technical Consultant Work Plan and is scheduled to be completed by September 2016.

[11] The dioxin-like PCB congeners are IUPAC numbers 77, 81, 105, 114, 118, 123, 126, 156, 157, 167, 169, and 189.

1.1 Specific Recommendations for POTWs

1.1.1 All POTWs

The EPA recommends that:

- The permits should require operation of tertiary filtration (once completed) year-round.[12]
- Prior to completion and optimization of tertiary filtration, the permits should include BMP requirement(s) to minimize discharges of TSS.[13]
- The permits should prohibit the POTW from authorizing discharges of PCBs to the treatment works unless the PCB concentration is <3 µg/L or unless the discharge is in accordance with a PCB discharge limit included in a pretreatment permit issued under §307(b) of the Clean Water Act.[14]

1.1.2 Pretreatment POTWs Only

The EPA recommends that:

- The permits should require sampling of all significant industrial users' (SIU) discharges for PCB aroclors using the most sensitive method approved under 40 CFR Part 136. All PCB aroclor results above the method detection limit (MDL) should be reported to the POTW and to the approval authority.
    - For any SIU where PCB aroclors are detected using approved methods, follow-up monitoring for PCB congeners using EPA Method 1668C should be performed at least once.
    - The POTW should use the results of the required monitoring of SIUs and any other available information to estimate the combined loading of total PCBs to the POTW from all SIUs.
    - If the POTW estimates that the combined loading of total PCBs to the POTW from all SIUs is at least ten percent of the influent total PCB loading to the POTW, the POTW should either develop numeric local limits for total PCBs or require SIUs to implement BMPs[15] to reduce discharges of total PCBs to the POTW.

1.2 Specific Recommendations for Industrial Individual Permits (Kaiser Aluminum and Inland Empire Paper)

The EPA recommends that:

- Ecology should analyze available effluent TSS and PCB data to determine if effluent TSS and PCB concentrations are positively correlated.

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[12] Phosphorus limits necessary to meet dissolved oxygen criteria will require operation of tertiary filtration (i.e., advanced solids removal) to meet effluent limits for phosphorus for eight to nine months of the year. This will reduce total suspended solids (TSS) loading, and, in turn, PCBs. Operating this kind of treatment year-round (even when not necessary to meet phosphorus limits) will further reduce TSS and PCBs on an annual basis. BMPs can include "treatment requirements" (40 CFR 122.2).

[13] PCB removal in POTWs is correlated with TSS removal. BMPs may be required when "the practices are reasonably necessary...to carry out the purposes and intent of the CWA" (40 CFR 122.44(k)(4).

[14] 40 CFR 761.50(a)(3)

[15] Local limits may be BMPs instead of numeric limits (40 CFR 403.5(c)(4)).

- If effluent TSS and PCB concentrations are determined to be positively correlated, Ecology should establish all known, available and reasonable treatment (AKART) or performance-based effluent limits for TSS. AKART or performance-based TSS limits should be re-evaluated following completion and optimization of tertiary filtration.
- The permits should require the permittee to address water conservation in its BMP plan.

1.2.1 Specific Recommendations Kaiser Aluminum

- The permit should require separate monitoring of the groundwater remediation discharge (if any) and the effluent from the black walnut shell filters for PCB congeners using EPA Method 1668C.

2 Recommendations for Fish Hatcheries in WRIAs 54, 55, and 57

The EPA recommends that:

- The permits should require monitoring of effluents for PCB congeners using EPA Method 1668C at a frequency adequate to assess sources of PCBs within the facility.
- The permits should require reporting of the total concentration of "dioxin-like" PCB congeners on DMRs.
- The permits should require the complete congener analysis to be submitted as an attachment to the DMR.
- The permits should require that the facilities' pollution prevention plans or BMP plans address PCBs from caulk, paint, and feed.
    - The permits should require removal of paint or caulk that contacts process water and that was applied prior to January 1, 1980.
        - During removal, permittees should implement PCB abatement and disposal consistent with EPA guidance.[16]
        - Permits should require BMPs to prevent removed PCB-containing paint or caulk from reaching waters of the United States and to ensure that disposal of such materials is performed in compliance with applicable state, federal, and local laws.
    - The permits should require the permittee to use any available product testing data to preferentially purchase paint and caulk with the lowest practicable total PCB concentrations.
- Recommendations for general NPDES permits may be incorporated into the permits themselves or into administrative orders, as appropriate.

3 General Recommendations for Stormwater Permits

The EPA recommends that:

- The permits, except construction stormwater permits, should require monitoring for PCBs at frequencies and locations adequate to assess and identify sources of PCBs to stormwater.
    - In general, for water sampling, the permits should require monitoring for PCB congeners using EPA Method 1668C. For monitoring of locations or waste streams that the

[16] http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/guide/guide-sect4.htm

permitting authority determines can be adequately characterized using less sensitive methods (e.g., EPA Method 608 or 8082), such methods may be used at such locations.

- For any monitoring of PCB congeners in final effluent, the permits should require reporting of the total concentration of "dioxin-like" PCB congeners on DMRs.
- For any monitoring of PCB congeners in final effluent, the permits should require the complete congener analysis to be submitted as an attachment to the DMR.
- When updating stormwater pollution prevention plan or stormwater management plan (SWPPP or SWMP) requirements in permits, the permitting authority should consider the Task Force's assessment of the optimal mix of BMPs applicable to the permitted sources.
- Recommendations for general NPDES permits may be incorporated into the permits themselves or into administrative orders, as appropriate.

3.1 Specific Recommendations for Areas of Permitted MS4s Contributing to Surface Water Discharges to the Spokane River or the Little Spokane River

The EPA recommends that:

- In addition to the general stormwater monitoring recommendations above, the permits should require monitoring for PCBs in sediment traps, catch basins, and in stormwater suspended particulate matter (SSPM) at frequencies and locations adequate to assess and identify sources of PCBs to municipal stormwater.
    - For monitoring of PCBs in solids, the permits should require a quantitation level for total PCBs no greater than 10 µg/kg dry weight.
- The permits should require all BMPs related to reducing or eliminating PCBs in stormwater to be prioritized in areas of the MS4 more likely to contribute PCBs to surface waters, based on any available information, including but not limited to the following:
    - Previous and ongoing PCB monitoring.
    - Nearby toxics cleanup sites with PCBs as a known contaminant.
    - Business inspections and compliance records.
- The permits should require removal of accumulated solids from drain lines (including inlets, catch basins, sumps, conveyance lines, and oil/water separators) in priority areas of the MS4 at least once during the permit cycle, unless the permittee can demonstrate that such removal is not necessary to reduce discharges of PCBs from stormwater.
- The permits should require removal of any identified legacy PCB sources within the MS4 (e.g., PCB-containing sealant) as soon as practicable.
- The permits should require preferential purchasing by the permittee of products with the lowest practicable PCB concentrations for products likely to contain inadvertently generated PCBs and to contact municipal stormwater, including but not limited to the following:
    - Hydroseed
    - Dust suppressants
    - Traffic marking paint
    - Deicer
- The permits should allow permittees to comply with PCB source control requirements through a collaborative effort.

- The permits should include the following requirements for new development and redevelopment disturbing one acre or more:
    - Site design to minimize impervious areas, preserve vegetation, and preserve natural drainage systems.
    - On-site stormwater management.

3.1.1 Specific Recommendations for Cities and Counties with MS4 Permits

The EPA recommends that:

- The permits should require the following, for construction projects requiring a building permit from the permittee that do **not** require an NPDES permit for construction stormwater:
    - During demolition of any structure with at least 10,000 square feet of floor space and built before January 1, 1980, the permittee should require the building permit applicant to implement BMPs to achieve the following:
        - Prevent removed PCB-containing building materials, including paint, caulk, and pre-1980 fluorescent lighting fixtures,[17] from contacting municipal stormwater or otherwise reaching waters of the United States; and
        - Ensure that disposal of such materials is performed in compliance with applicable state, federal, and local laws.
- The permits should address possible contributions of PCBs to the MS4 from businesses within the areas served by the MS4 as follows:
    - The permits should require the establishment and maintenance of a database of inspections and status of compliance with applicable State and federal laws and local ordinance related to PCBs in stormwater, for businesses within the area served by the MS4.
    - Based on the information in the database and other available information, the permits should require the permittees to identify businesses that are likely to contribute PCBs to the MS4 and to follow up with such businesses and appropriate regulatory agencies to develop and implement BMPs to reduce contributions of PCBs to the MS4 from such businesses.

3.1.2 Specific Recommendations for Idaho MS4 Permits

The EPA recommends that:

- The permitting authority should issue a Clean Water Act §308 letter requiring monitoring for PCBs at frequencies and locations adequate to assess and identify sources of PCBs to stormwater, unless final permits including such monitoring requirements are issued by July 1, 2016.
    - In general, the permits should require monitoring for PCB congeners using EPA Method 1668C. For monitoring of locations or waste streams that the permitting authority determines can be adequately characterized using less sensitive methods (e.g., EPA Method 608 or 8082), such methods may be used at such locations.

[17] http://www.epa.gov/solidwaste/hazard/tsd/pcbs/pubs/ballasts.htm

3.2 Specific Recommendations for Industrial Stormwater Permits

The EPA recommends that:

- The permits should require removal of accumulated solids from storm drain lines (including inlets, catch basins, sumps, conveyance lines, and oil/water separators) within the facility at least once during the permit cycle, unless the permittee can demonstrate that such removal is not necessary to reduce discharges of PCBs from stormwater.
- The permits should require removal of any identified legacy PCB sources within the facility's storm drain lines (e.g. PCB-containing sealant) as soon as practicable.
- If hydroseed is used for erosion and sediment control, the permittee should use any available product testing data to preferentially purchase hydroseed with the lowest practicable total PCB concentration.[18]
- If dust suppressants other than water are used (e.g., on unimproved roads), the permittee should use any available product testing data to preferentially purchase dust suppressants with the lowest practicable total PCB concentration.[19]

3.3 Specific Recommendations for Construction Stormwater Permits

The EPA recommends that:

- During demolition of any structure with at least 10,000 square feet of floor space and built before January 1, 1980, the permits should require the permittee to implement BMPs to achieve the following:
    - Prevent PCB-containing building materials, including paint, caulk, and pre-1980 fluorescent lighting fixtures, from contacting stormwater or otherwise reaching waters of the United States; and
    - Ensure that disposal of such materials is performed in compliance with applicable state, federal and local laws.
- If dust suppressants other than water are used, the permittee should use any available product testing data to preferentially purchase dust suppressants with the lowest practicable total PCB concentration.
- If hydroseed is used, the permittee should use any available product testing data to preferentially purchase hydroseed with the lowest practicable total PCB concentration.

[18] The Task Force is investigating PCBs in hydroseed. Product testing by the City of Spokane showed PCB concentrations of about 2.5 ppm in hydroseed.

[19] The City of Spokane's product testing found concentrations ranging from 0.09 – 3.6 ppb (i.e., a two-order-of-magnitude range).